

REMARKS

Claims 1-20 are all the claims pending in the application. Claims 2, 3, 5, 6, 8, 9, 11 and 12 have been amended, and support for the amendment can be found, for example, at page 6, lines 16-23; page 22, line 13 to page 24, line 17; pages 38-39; and Figure 4.

Entry of the above amendment is respectfully requested.

I. Response to Rejection of claims 2-3 and 5-6 under 35 U.S.C. §102(b)

The rejection of claims 2-3 and 5-6 under 35 U.S.C. §102(b) as allegedly being anticipated by Besemer et al (US 6,140,044) is maintained.

Applicant respectfully traverse the rejection and submits that Besemer does not disclose, teach or suggest the present invention.

A difference between the present invention and Besemer is that Besemer does not disclose, teach or suggest the porous adsorptive regions of the present invention. The Examiner asserts that column 6, line 2, Besemer disclosures that the probe is formed on a surface of a wafer, which can be a membrane. However, the porous adsorptive regions of the biochemical analysis unit of the present invention is formed by forming holes in a base plate 2 by, for example, punching with a pin, electrical discharge machining, etching or laser beam irradiation, and filling the holes with a porous material. *See* page 22, line 13 to page 24, line 17. Accordingly, the claims recite that the porous adsorptive regions comprise holes filled with a porous material to more clearly distinguish the porous adsorptive regions of the present invention from the membrane of Besemer. Accordingly, Besemer does not teach the porous adsorptive regions of the present invention.

As a result of the differences between the probe array and the porous adsorptive

regions, different bubbles are generated. That is, bubbles that cling to the adsorptive regions form in the present invention while bubbles are formed as a result of the use of nitrogen to introduce and circulate the fluid in Besemer. Unlike Besemer, bubbles cannot be removed by merely causing fluid to flow in the vertical direction in the present invention. Therefore it is required to provide a process for positively removing or dissolving bubbles in the present invention. Consequently, the objective or problem to be solved by the present invention and Besemer are different.

Since Besemer does not teach or suggest the porous adsorptive regions of the present invention, Besemer does not teach or suggest causing fluid to flow across the porous adsorptive regions. However, the Examiner asserts that "across" indicates a general directional movement, and does not necessarily define movement through a porous region, thus the claims are broad enough to cover flow over a region. In the present invention, the primary object of the present invention is to prevent problems that occur when a reaction liquid is forcibly circulated through the interior of each adsorptive region. See page 6, lines 16-23 of the present specification. In addition, as shown in Figure 4 and discussed at pages 38-39, in the reaction vessel of the present invention, a top wall of a reaction vessel upper half is provided with a reaction liquid outlet, a bottom wall of a reaction vessel lower half is provided with a reaction liquid inlet, and a biochemical analysis unit is set within the vessel. To more clearly distinguish the present invention from Besemer, the claims have been amended to recite that the fluid flows through the holes of the porous adsorptive regions.

In view of the above, it is respectfully submitted that present invention is not anticipated by Besemer.

Accordingly, withdrawal of the rejection is respectfully requested.

II. Response to Rejection of Claims 8-9 and 11-12 under 35 U.S.C. §103

The rejection of claims 8-9 and 11-12 under 35 U.S.C. §103(a) as allegedly being unpatentable over Besemer et al. in view of Bronstein et al (US 5,543,295) is maintained.

Applicants respectfully traverse the rejection and submit that the cited references do not render the present invention obvious. It is respectfully submitted that claims 8-9 and 11-12 depend from claims 2 or 3, and thus, claims 8-9 and 11-12 are patentable for at least the same reasons as claims 2 and 3, as discussed above.

In addition, Besemer is related to a means for performing a bio-assay detection and Bronstein is related to an improvement in chemiluminescent dioxetanes. Therefore, even if the teachings of Besemer and Bronstein were somehow combined, a means for merely performing a bioassay detection using improved chemiluminescent dioxetanes would be obtained. This is because a problem of the generation of bubbles does not occur in Besemer since Besemer does not teach or suggest porous adsorptive regions. Thus, even if the teachings of Besemer and Bronstein were combined, one of ordinary skill in the art would not have easily conceived of the step of performing a bubble removing process for removing bubbles as claimed in claim 2 or the step of performing bubble dissolving processing for dissolving bubbles as claimed in claim 3.

In view of the above, it is respectfully submitted that the present invention is not rendered obvious by Besemer and Bronstein.

Accordingly, withdrawal of the rejection is respectfully requested.

III. Response to Obviousness-type Double Patenting

Claims 2-3, 5-6, 8-9 and 11-12 are provisionally rejected under the judicially created

doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-4 of co-pending application no. 10/649,719 in view of Besemer et al.

Without acquiescing in the merits of the rejection, the Examiner is respectfully requested to hold the provisional double patenting rejection in abeyance, until one or the other co-pending application is otherwise in condition for allowance.

In view of the above, withdrawal of the obviousness-type double patenting rejection is respectfully requested.

IV. Conclusion

For the above reasons, reconsideration and allowance of this application is respectfully requested.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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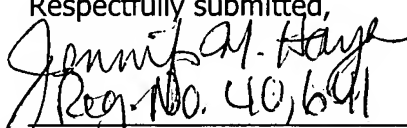

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